MAY 25 2000

Mr. Ted Brenneman, Environmental Manager
Oxy Vinyls, LP
P.O. Box 500
Deer Park, TX 77536

Re: Draft Final Report, Patrick Bayou Pollutant Source Study

Dear Mr. Brenneman:

Thank you for your April 28 letter transmitting the draft final report for the Patrick Bayou pollutant source study. The report does a very good job to document the sampling activities and the resultant data. The data are of high quality and serve to shed a much clearer light the sources of pollutants of concern in the water column and bottom sediments of Patrick Bayou. We appreciate the consistent effort that went into generating high quality data and for your present pursuits in identifying and controlling internal waste stream sources of these pollutants. We also appreciate you and the other industry participants coming to Dallas May 16, 2000 to meet and discuss the final report. Our review comments, which we request that you address when finalizing the report, are as follows:

Please include an executive summary which provides a synopsis of the study and its findings.

Sections 1.2, 3.1.1 and 4.1 - The location of the intake structure should be shown on maps or otherwise described. Note that it is highly likely that the intake water quality is influenced by Patrick Bayou. The intake structure is relatively close to the mouth of the bayou and the degree of influence may be most extreme during certain tidal and wind conditions.

Figure 3.1 - Are there any reasons why the copper concentration at Shell Refinery discharge is increasing with time?

Section 3.1.1 (page 3-3) - Please discuss mercury and Aroclor 1248 in the section on outfall 002.

Section 3.3 - The use of TEXTOX modeling does not take into account the cumulative effect of discharges on the pollutants of concern. The modeling did not take into account upstream concentrations of pollutants. This comment was also made in EPA's (Richard Hoppers') April 19, 1999 letter to you on the Interim Report. The TEXTOX results should be qualified to state this limitation.

Section 3.3 - Application of the Grubbs outlier test for discarding elevated concentrations in the averaging of data is technically questionable. This type of statistical test is applied when the data values are suspect or erroneous. However, in the case of the study data, very stringent QA/QC requirements were met and the data should be of high quality. There is a fundamental difference between high values and erroneous values. Data should not be discarded unless justified within the document by evidence that the data are of poor or suspect quality. Note that Section 3.6 indicates that "No major QA/QC problems were found during the validation of the data submitted by the laboratories. No reported results have been qualified unusable."

Section 3.4.3 - What is Shell's interpretation of elevated metals concentrations in the R-003 discharge (e.g., 4,372 ug/l of zinc)? What is the projected loading and might these levels lead to water quality problems? Source evaluation is recommended to address the high storm water concentrations.

Section 4.1 - OxyVinyls had relatively high concentrations of some pollutants (e.g., nickel and zinc) although these pollutants were not flagged as a potential problem using TEXTOX. However, some evaluation to address these pollutants would seem appropriate because of the cumulative loading to the water body.

Mercury increased five-fold in the OxyVinyls 001discharge during storm water conditions. Higher loading under storm water conditions should be factored into the existing source evaluation for this outfall.

A couple of typos were found: Section 3.3 - The last sentence of the first paragraph seems to have a typo (needs clarification). Also, in this section (page 3-8), in the 2nd full paragraph, the second sentence should read "...sample results...".

If possible, we would appreciate a total of seven copies of the final report for EPA and TNRCC use.

Please continue to keep us apprized of activities related to identifying and controlling pollutants of concern, such as mercury (OxyVinyls outfall 001) and dioxins/furans (OxyVinyls outall 002), which are already underway. According to the presentation at the May 16 meeting, further analyses are planned on dioxins/furans for OxyVinyls outfall 001, and mercury and aroclor 1248 and for OxyVinyls outfall 002. We also recommend investigation on OxyVinyls outfall 005 and Shell outfall R-003 (see comments above).

Thanks for considering these comments in finalizing the report. Again, we have appreciated all the hard work that has gone into this project by the industry representatives and the consultant. Please contact me at (214) 665-6644 if you have any questions.

Sincerely yours,

Philip A. Crocker
Watershed Management Section

cc: Janice Wendel, Shell Chemical Co.
Norman Mollard, Lubrizol Corp.
Phyllis Frank, Parsons Engineering Science

bcc: Phillip Jennings, 6WQ-P
Linda Broach, TNRCC-Houston
Larry Loenig, TNRCC-Austin

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